



CHAPTER 4

Long-Term Forecast of Washington Personal Income

TRENDS IN WASHINGTON PERSONAL INCOME reflect the state's economic, labor force, and population growth. For private businesses, the size and composition of personal income provide a good measure of consumer demand and market potential. For governments, personal income is an important indicator for monitoring state economic conditions, anticipating tax revenues, and assessing the level of services required.

Per capita personal income is often used to assess the economic well being of state residents. Trends in state per capita income reflect local economic changes, poverty status, business climate, standard of living, and the state's obligation and ability to finance the means-tested entitlement programs.

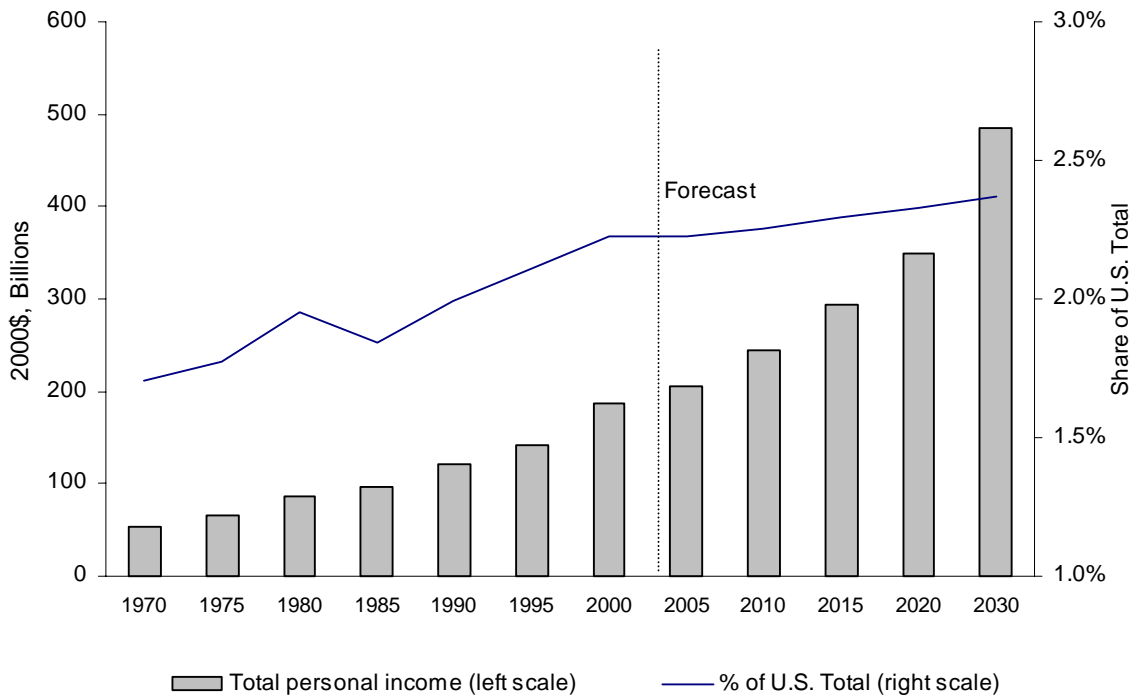
Total Personal Income Trends

In 2004, total personal income in Washington was \$213.0 billion. After adjusting for inflation, total state personal income in 2004 was more than three-and-a-half times the 1970 level, increasing at an average annual rate of 3.9 percent over the past three decades. Total personal income in the state, inflation-adjusted, is projected to grow an average 3.5 percent a year between 2004 and 2030, a significant slowdown from past growth. The anticipated slowdown in total personal income growth reflects expected slower growth in state population and labor force, which act to offset expected productivity and per capita income increases.

Washington State in 2004 accounted for 2.2 percent of total personal income in the nation, a significant increase from the 1.7 percent share in 1970. The share increased because the state economy and population have been expanding faster than for the nation as a whole. In the future economic and population growth in the state is expected to be closer to that for the nation and, by 2030, about 2.4 percent of the nation's total personal income is forecasted to be in the state (Figure 4-1).

Personal income growth fluctuates with the business cycle. From a long-term perspective, personal income growth in Washington closely mirrors the national trend, but with more erratic and volatile short-term movements (Figure 4-2). Excluding the cyclical peaks and troughs, state personal income growth has fluctuated within a range of two to four percent. In the future, more stable income growth is expected due to the declining role of cyclical industries and the growing diversification of the state economy.

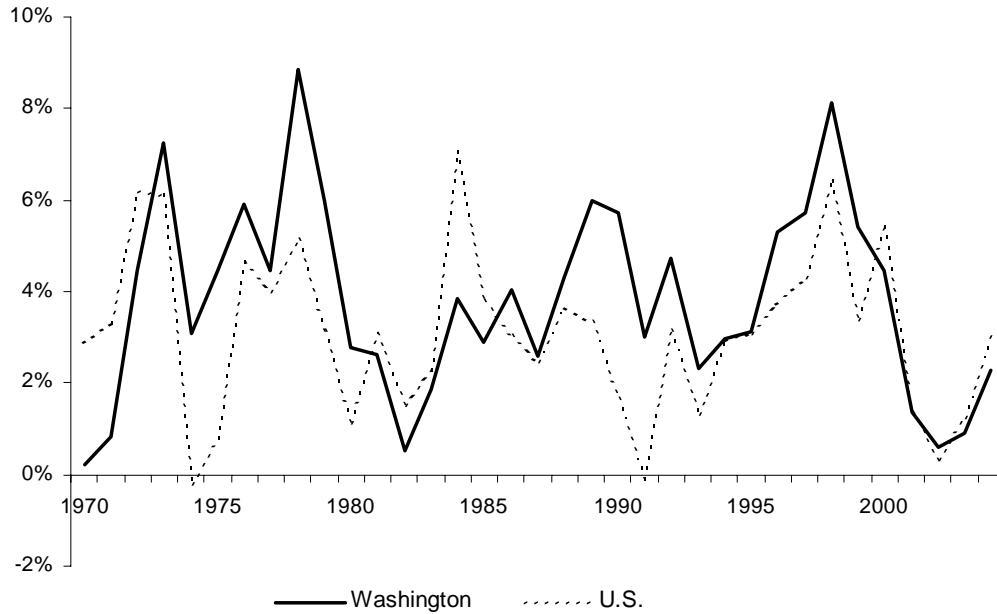
Figure 4-1
Total Real Personal Income, Washington



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Figure 4-2
Annual Change in Total Real Personal Income



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Income Growth by Component

Personal income, as defined by the Bureau of Economic Analysis, has three major components: (1) earnings (wages, other labor income, and proprietor's income); (2) dividends, interest, and rent; and (3) government transfer payments. In 2004, earnings accounted for 68 percent of total personal income in Washington; and dividends/interest/rent and transfer payments represented 19 and 13 percent of total personal income, respectively. These three income components have been growing at different rates over the past three decades (Table 4-1).

- Earnings.** Washington real total earnings (in 2000 constant dollars) more than tripled from 44.3 billion in 1970 to 155.7 billion in 2004. The average annual growth rate of earnings was 3.8 percent, slightly lower than the 3.9 percent rate for total personal income growth. Earnings growth is subject to cyclical factors. In the first half of the 1990s, growth in total earnings in Washington slowed significantly. The 2.1 percent annual increase from 1992 to 1995 was the lowest earnings growth the state had experienced since the 1982-83 recession; cutbacks in the aerospace industry were the major culprit for the mediocre performance. Earnings growth rebounded strongly to 6.8 percent per year from 1995 to 1999, but then slowed to 3.8 percent in 2000. Total earnings declined in 2001, as the recession hit, and grew only slowly over the next two years. Real earnings grew by 3.1 percent during 2004.

Table 4-1
Real Income Growth by Component: Washington

Income Components	Average Annual Growth Rate (%)							1970-2004
	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	2000-2004	
Total Personal Income	4.0	5.6	2.3	4.5	3.2	5.8	1.3	3.9
Earnings	3.6	5.7	1.1	4.9	3.1	6.2	1.4	3.8
Dividends, Interest, and Rent	4.2	8.0	7.3	4.0	2.3	5.2	2.0	4.8
Transfer Payments	8.3	3.1	4.7	4.0	5.7	3.2	4.3	4.8

Earnings growth has also varied significantly across industries (Table 4-2). Total farm earnings in real terms has been relatively flat since 1970, and its share of total earnings in the state declined from 2.9 percent in 1970 to 0.9 percent in 2004. Real earnings from manufacturing more than doubled between 1970 and 2001, but its share of total earnings declined from 23 percent to 14 percent. Real earnings from manufacturing declined during the 2001-04 period.¹

¹ Note that the industrial data before and after 2001 in Table 4-2 are not strictly comparable. See the notes to Table 4-2.

Despite substantial job gains, retail and wholesale trade earnings as a share of total earnings declined from 17 percent in 1970 to 15 percent in 2001. Real earnings from services increased nearly six fold over the 1970-2001 period, increasing at an annual rate of 5.8 percent—far above the 3.9 percent growth rate for total earnings. Services cover a wide range of sectors and occupations. Earnings growth in services accelerated in the second half of the 1980s, driven by rapid growth in high-paying sectors such as business, health, and management and consulting services. Growth was especially rapid during the second half of the 1990s, as the strong economy and soaring stock option earnings fueled earnings growth in these sectors.

Table 4-2
Growth in Real Earnings by Industry: Washington

	Average Annual Growth Rate (%)						
	1970- 1975	1975- 1980	1980- 1985	1985- 1990	1990- 1995	1995- 2001	2001- 2004*
Total Earnings	3.6	5.7	1.1	4.9	3.1	5.1	1.9
Farm	14.1	-8.1	-7.5	5.9	1.4	-2.4	2.8
Manufacturing	2.0	7.1	-0.8	4.3	-0.4	2.4	-1.5
Wholesale & Retail	3.8	5.0	1.3	3.6	2.8	4.0	2.2
Services and Other**	3.7	7.7	2.8	6.5	5.7	7.9	1.5

*Industrial data before and after 2001 are not strictly comparable. Estimates from 1970 to 2001 are based on SIC industrial classifications; estimates from 2001 to 2004 are based on NAICs classifications. Changes under NAICs include, among other things, the movement of eating establishments from retail trade to services and the creation of an information sector.

**‘Other’ includes transportation, communication, utilities, finance, insurance, and real estate prior to 2001.

After 2001, the group also includes information and food services.

- **Dividends, interest, and rent.** The proportion of total personal income derived from property- and saving-related income sources increased from 14.2 percent in 1970 to 19.8 percent in 1990. The share of income from these sources increased in the 1980s due in part to high interest rates early in the decade and soaring property values in the second half of the decade. Between 1990 and 1995, real income from dividends, interest, and rent grew at an annual rate of 2.3 percent in the state, far lower than the long-term average of 4.8 percent. From 1995 to 2000, growth rebounded to an average annual rate of 5.2 percent, but slowed again from 2000 to 2004.

In the short term, income from dividends, interest, and rent is affected mainly by monetary policies and cyclical conditions. Over the long run, it reflects past earnings and savings behavior of state residents. Future growth of this component of personal income, therefore, depends on the state’s success in retaining and attracting households with the ability and propensity to save and invest.

- **Transfer payments.** The importance of transfer payments as a source of personal income has increased over the past three decades, reflecting the impact of the government policies dealing with social security, welfare, unemployment, and farm subsidies. Substantial increases in medical transfer payments have helped to fuel this growth; Medicare and Medicaid transfers, after adjusting for inflation, grew at an average annual rate of 7.7 percent from 1970 to 2003.

A significant portion of transfer payments is counter-cyclical. In Washington, income derived from income maintenance and unemployment insurance benefit payments accounted for as high as 28.2 percent of total transfer payments during the cyclical trough in 1971, and as low as 12.4 percent in 2000, when the state economy reached its last cyclical peak.

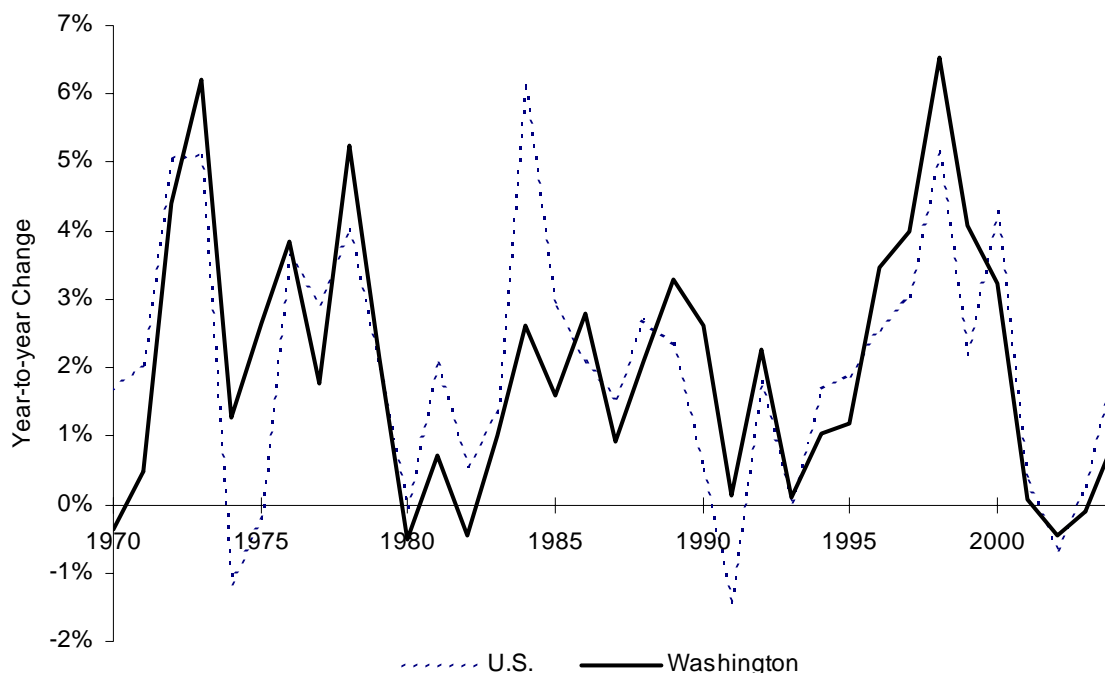
Per Capita Income Trends

Real per capita income is derived by dividing state total personal income by total population, and then adjusting for inflation using the Implicit Price Deflator (IPD) for personal consumption from the National Income and Product Account (2000 = 1.00). In 2004, real per capita personal income for the state was estimated at \$31,885, about 5 percent above the national average of \$30,438.

Real per capita income in the state doubled over the past three decades. Between 1970 and 2004, Washington real per capita personal income grew at an average annual rate of 2.1 percent, roughly the same as the average growth of 2.0 percent for the nation as a whole. Growth fluctuated along with prevailing state economic conditions. During most expansionary periods, state per capita personal income rose faster than the U.S. average. Conversely, per capita income growth in the state was usually below the national trend during recessions or periods of slow economic growth (Figure 4-3). In the past, growth in the state's aerospace industry played a major role in the growth of Washington personal income.

After the late-1970s, growth in real per capita personal income has slowed, both in the state and the nation. Nationally, the most commonly cited reason for this was the slowdown in productivity growth. The state economy also suffered from the collapse of non-oil commodity prices during the 1970s and the early 1980s, which hurt its resource-based industries. Other contributing factors included the appreciation of the dollar in relation to foreign currencies in the first half of the 1980s, which hurt the state's export industries; the rise in real interest rates in the 1980s, which lowered demand for some of Washington's durable goods products; and the sudden termination of a Washington Public Power Supply System construction project and loss of shipbuilding jobs in the early 1980s. By 1985, the state per capita income dropped below the national average.

Figure 4-3
Annual Changes in Real Per Capita Income



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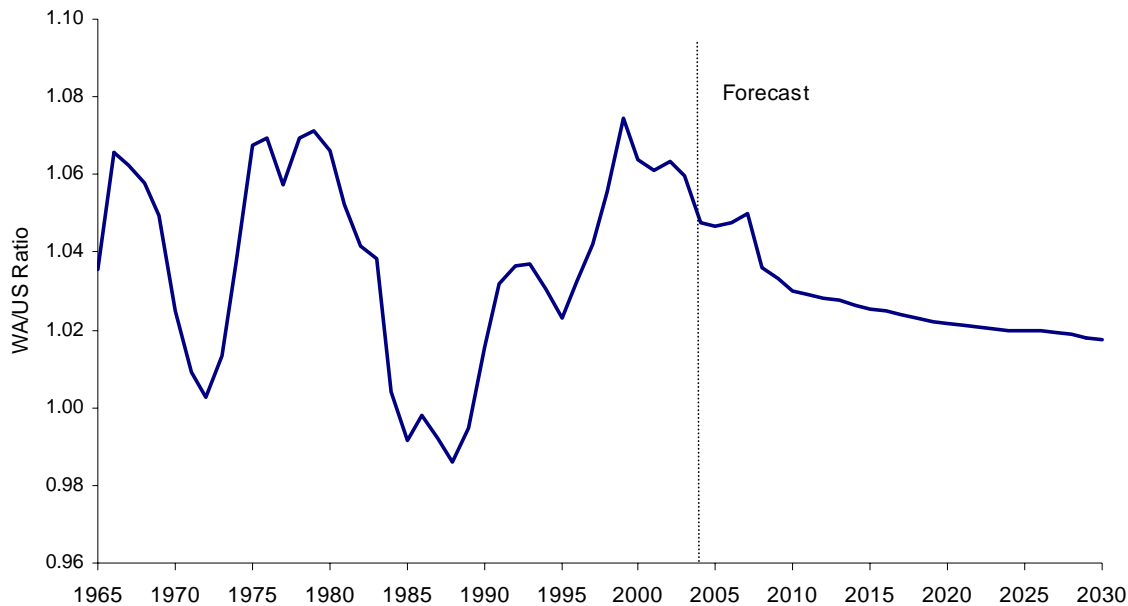
In the second half of the 1980s, Washington had substantial job gains in aerospace and high-tech manufacturing industries and significant growth in the evolving high-wage “knowledge-based” service sectors. In addition, Washington’s export industries were stimulated by a decline in the value of dollar relative to other currencies. As a result, real per capita income grew faster in the state than in the nation. By 1990, per capita income in the state was 1.6 percent higher than the national average.

The state’s economy was at full strength in 1990, when the U.S. economy was heading into a recession. In 1991, the aerospace sector started cutting back production because of a shrinking commercial aircraft market. The negative effect of the aerospace reduction, however, was offset to a large extent by other prospering sectors (e.g., machinery manufacturing and business services) in the state. Real per capita income growth in Washington did slow in the early 1990s, but the nation as a whole suffered an even greater drop in income growth.

Between 1992 and 1995, the Washington economy stalled due to on-going job losses in aerospace. At the same time the national economic recovery picked up pace, and per capita income growth in the state dropped below the national average. Economic growth in the state accelerated in 1995, as strong national economic growth raised the demand for goods produced in the state. By 2000, the state unemployment rate dipped to 5.2 percent, the employment-to-population ratio rose to a historic high, and per capita income grew rapidly. The last recession hit in 2001, and real per capita income in the state declined during 2002 and 2003.

State per capita income averaged more than 3 percent above the national level over the past three decades. However, the volatility of certain manufacturing and resource-based industries in the state periodically narrowed or widened the per capita income gap between Washington and the nation. In 1999, the state per capita income was 7.5 percent above the national average, a record high since the late 1970s (Figure 4-4). The gap narrowed to 4.8 percent in 2004.

Figure 4-4
Ratio of Washington-to-U.S. Per Capita Income



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Outlook for Personal Income Growth in Washington

Over the next 25 years, Washington's economy is expected to continue to diversify, with an industrial profile that more closely resembles that of the nation. This suggests that the state will likely have more stable economic growth, that personal income movements will be less volatile, and that the state's per capita income level will converge toward the national average in the future.

According to the long-term projections, Washington per capita personal income level will converge to but remain above the national average over the forecast horizon. Several factors contribute to the comparative strength of Washington's per capita income outlook:

- In the next two and a half decades, worldwide aircraft demand is expected to remain healthy. However, the trend of increasing out-sourcing of aerospace production will continue.
- Washington will maintain a relatively healthy manufacturing base. For example, agriculture and food products in the state will continue to benefit from improving access to worldwide food markets; and many of these markets are in fast-growing developing countries.

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- The state's high-wage durable goods and high-technology industries will benefit from the expected macroeconomic trend toward lower and more stable real interest rates, accompanied by increasing international demand for capital goods.
- A more integrated global economy will help expand state exports and stimulate export-related business activities. In addition, Washington has a geographic advantage in attracting foreign investment.
- Recent business expansion and investment activities suggest that Washington has the critical mass required to attract high-tech manufacturing and knowledge-based business service industries. The high wage jobs offered by these industries will help raise per capita income.

The Office of Financial Management per capita income projection model incorporates these factors in its forecast of per capita income growth in Washington.

Per Capita Income Growth Forecast

Between 1970 and 2004, real per capita income in the state grew at an average 2.1 percent per year. Over the next 25 years, growth is expected to be somewhat higher at an annual rate of 2.3 percent. Productivity increases and a favorable industrial mix in the state economy will support income growth. The expected decline in labor force growth and a lower employment-to-population ratio, both resulting from an aging population, will act to constrain per capita income growth in Washington and the nation.

Table 4-3 shows the long-term personal income forecast for Washington and the U.S. By 2030, real per capita income in Washington is expected to rise to \$57,088, about 79 percent above the 2004 level.

2005 LONG-TERM ECONOMIC AND LABOR FORCE FORECAST

**Table 4-3
Personal Income Trends: Washington and U.S.**

Year	Total Real Personal Income (2000 Dollars)				Per Capita Income (2000 Dollars)			
	Washington (Billions)	Annual Change (%)	U.S. (Billions)	Annual Change (%)	Washington	Annual Change (%)	U.S.	Annual Change (%)
1970	54.16	0.2	3,171.13	2.9	15,827	-0.3	15,440	1.7
1975	65.87	4.5	3,712.36	0.8	18,332	2.7	17,173	-0.2
1980	86.40	2.8	4,430.79	1.1	20,726	-0.5	19,436	0.0
1981	88.66	2.6	4,567.65	3.1	20,875	0.7	19,838	2.1
1982	89.10	0.5	4,636.28	1.5	20,780	-0.5	19,949	0.6
1983	90.77	1.9	4,741.30	2.3	20,988	1.0	20,218	1.3
1984	94.28	3.9	5,075.89	7.1	21,538	2.6	21,453	6.1
1985	97.00	2.9	5,268.51	3.8	21,880	1.6	22,070	2.9
1986	100.92	4.0	5,428.47	3.0	22,494	2.8	22,534	2.1
1987	103.54	2.6	5,563.25	2.5	22,702	0.9	22,888	1.6
1988	107.98	4.3	5,766.73	3.7	23,179	2.1	23,510	2.7
1989	114.43	6.0	5,960.15	3.4	23,938	3.3	24,065	2.4
1990	120.98	5.7	6,060.54	1.7	24,566	2.6	24,185	0.5
1991	124.64	3.0	6,054.72	-0.1	24,601	0.1	23,843	-1.4
1996	130.53	4.7	6,247.14	3.2	25,160	2.3	24,276	1.8
1993	133.55	2.3	6,330.22	1.3	25,185	0.1	24,283	0.0
1994	137.52	3.0	6,516.18	2.9	25,447	1.0	24,697	1.7
1995	141.79	3.1	6,717.99	3.1	25,748	1.2	25,164	1.9
1996	149.28	5.3	6,969.95	3.8	26,638	3.5	25,804	2.5
1997	157.81	5.7	7,269.29	4.3	27,704	4.0	26,592	3.1
1998	170.62	8.1	7,733.70	6.4	29,517	6.5	27,965	5.2
1999	179.85	5.4	7,995.86	3.4	30,718	4.1	28,586	2.2
2000	187.87	4.5	8,429.32	5.4	31,712	3.2	29,808	4.3
2001	190.43	1.4	8,545.21	1.4	31,740	0.1	29,909	0.3
2002	191.58	0.6	8,574.77	0.3	31,599	-0.4	29,713	-0.7
2003	193.31	0.9	8,683.00	1.3	31,571	-0.1	29,799	0.3
2004	197.70	2.3	8,945.50	3.0	31,885	1.0	30,438	2.1
Forecast								
2005	204.88		9,212.30		32,564		31,118	
2010	244.95		10,870.98		36,107		35,054	
2015	294.62		12,850.63		40,722		39,717	
2020	350.20		15,050.23		45,622		44,660	
2030	484.35		20,464.70		57,088		56,099	
Average Annual Growth Rate (%)								
2000-2005		1.7		1.8		0.5		0.9
2005-2010		3.6		3.4		2.1		2.4
2010-2015		3.8		3.4		2.4		2.5
2015-2020		3.5		3.2		2.3		2.4
2020-2030		3.3		3.1		2.3		2.3
1970-2000		4.2		3.3		2.3		2.2
2000-2030		3.2		3.0		2.0		2.1

Combining per capita income and population growth, total state personal income is expected to more than double over the next 25 years, from \$197.7 billion in 2004 to \$484.3 billion in 2030 (in 2000 constant dollars). This represents an average annual growth rate of 3.5 percent during the forecast period, higher than the 3.2 percent rate projected for the nation. As a result, Washington's share of total national personal income increases from 2.2 percent in 2004 to 2.4 percent in 2030.

Figure 4-5
Growth of Real Total Personal Income

